

REMARKS

Claims 1-49 are pending in this application. Claims 10-15, 21-30, and 34-44 are withdrawn from consideration as drawn to non-elected invention. Claims 4, 5, 8, 9, 18, 20, 33, and 49 are canceled herein without prejudice. Thus, claims 1-3, 6, 7, 16, 17, 19, 31, 32, and 45-48 are under consideration.

35 U.S.C. § 112, first paragraph

Claims 1, 4-9, 16, 18-20, 31, 33 and 45-49 are rejected under 35 U.S.C. § 112, ¶ 1, for allegedly containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In particular, the Examiner has rejected claims 1, 4-9, 16, 18-20, 31, 33 and 45-49 for the recitation of “substantially the same as SEQ ID NO: 1” or “fragments of SEQ ID NO: 1.” Applicants respectfully traverse the rejection.

The Examiner contends that the disclosure “fails to describe the common attributes or characteristics that identify members of the genus, and because the genus is highly variant, SEQ ID NO: 1 alone is insufficient to describe the genus.” The Examiner also asserts that the recitation of “fragments of SEQ ID NO: 1” includes fragments “as small as a single nucleotide,” and that combining this phrase with the term “having” must therefore encompass “every single DNA molecule isolated since the beginning of time.” Applicants respectfully traverse the rejection.

Although the applicants maintain their position regarding the phrase “substantially the same as,” in order to further prosecution in this matter, applicants have amended claims 1, 16, and 31 to remove reference to “substantially the same as” and canceled claims 4, 5, 8, 9, 18, 20, 33, and 49. As no claims that remain under consideration contain rejected language, this rejection is moot.

Regarding the phrase “*H. capsulatum* M antigen specific,” applicants have amended the claims to move the phrase from the preamble of the claims to the body of the claims to remove

any uncertainty as to the intent of the limitation. Because this phrase was previously considered by the Examiner, the amendments do not constitute new matter or present any new issues and should be entered.

With respect to the term “fragment,” the Examiner is attempting to interpret the meaning of words in the claims in a manner inconsistent with the specific meaning ascribed to those words in the specification. As the Examiner is no doubt aware, the specification can be used in interpreting claim language when the specification provides definitions for terms appearing in the claims. *In re Vogel*, 422 F.2d 438, 441 164 USPQ 619, 612 (CCPA 1970). Specifically, the meaning of the term “fragment” is read not only in light of the definition on page 16, lines 13-23, but in light of the limitation “*H. capsulatum* M antigen-specific” which is defined on page 15, lines 18-23. Using these definitions, the Examiner cannot properly construe the claims to “include fragments as small as a single nucleotide,” as such an interpretation would not be possible in light of the definition of “specific to.” As defined on page 15, lines 7-23, “*H. capsulatum* M antigen-specific” limits the claim to antigens that “[t]he phrases ‘specific to’ and ‘unique to’ the fungus *H. capsulatum* as used herein in relation to a nucleic acid or nucleic acid fragment means a nucleic acid or nucleic acid fragment which is not common to other related fungi or other microorganisms (i.e., it is only present in the fungus *H. capsulatum*)” [emphasis added].

The phrase “*H. capsulatum* M antigen-specific” is an affirmative limitation that excludes sequences found in other organisms or in other *H. capsulatum* proteins. Thus, the claims must be read with the limitation of “*H. capsulatum* M antigen-specific” in mind, and cannot include fragments as small as a single nucleic acid. The inclusion of single nucleotides as fragments would run contrary to the definition of “specific to” as the nucleotides are shared among every isolated sequence since the beginning of time. Clearly something shared can not be said to be only present in *H. capsulatum*. Thus, the claims define the distinguishing, common attributes of this genus through, at least, the requirement that the nucleic acid be “*H. capsulatum* M antigen specific.”

A fragment of a molecule is, by definition, a subpart of that molecule. In the case of a nucleic acid, its fragments can only comprise contiguous nucleotides of the parent molecule. Thus, the genus of fragments of SEQ ID NO: 1 is completely and clearly described by the nucleotide sequence of SEQ ID NO: 1 itself. The specification clearly stipulates that a nucleic acid “fragment” means a “subsequence of the nucleic acid which is of a sufficient size and confirmation to properly function as a hybridization probe, as a primer in a polymerase chain reaction [(PCR)], to code for a polypeptide or polypeptide fragment, or in another manner characteristic of nucleic acids (page 16, lines 18-23).” Thus, there is no basis to assert that the genus of fragments of SEQ ID NO: 1 is not fully described. Since the genus is further constrained by the requirement that the fragments be *H. capsulatum* M antigen-specific, the genus is well-within the vision of the skilled artisan.

In summary, applicants have amended the claims to remove reference to “substantially the same as” from the claims. Also, as noted above, the term “fragment” read in conjunction with the limitation “*H. capsulatum* M antigen-specific” and in light of the terms defined in the specification, provides a very specific genus relating to the structure (ie. the sequence) of SEQ ID NO: 1 which contains a finite number of species. All species being found only in the M antigen of *H. capsulatum*. Applicants believe this rejection to be overcome and respectfully request it be withdrawn.

35 U.S.C. § 112, second paragraph

Claims 1, 4-5, 8-9, 16, 18, 20, 31 and 33 are rejected under 35 U.S.C. § 112, ¶ 2, for allegedly containing subject matter which is indefinite. In particular, the Examiner alleges that the phrase “substantially the same as” is vague and indefinite. Applicants note that claims 4, 5, 8, 9, 18, 20, 33, and 49 have been canceled and claims 1, 16, and 31 to remove reference to “substantially the same as.” Applicants believe this rejection is now moot, and respectfully request its withdrawal.

35 U.S.C. § 102

Claims 1-9, 16- 20, 31-33, and 45-49 are rejected under 35 U.S.C. § 102(a), for allegedly being anticipated by Zancopé-Oliveira et al. (1997) in *Abstracts of the 97th General Meeting of the American Society of Microbiology* p. 266, F-35. Applicants respectfully traverse this rejection.

Applicants respectfully point out that the cited publication is not enabling for the information it discloses. It is a well known tenet of patent law that in order for a publication to anticipate a claim and therefore qualify as art under 35 USC 102(a), the cited art must be “known or used by others ... or described in a printed publication ...” Furthermore, the cited publication must be enabling for what it discloses. *In re Hoeksema*, 399 F.2d 269, 158 USPQ 596 (CCPA 1968). Here, the Zancopé-Oliveira et al. reference discloses merely the existence of a sequence to the M antigen of *H. capsulatum*. The reference does not disclose the actual sequence, and therefore does not put the public in possession of the invention. Moreover, as no actual sequence is provided in the disclosure, it can not be ascertained from the publication if the sequence referred to in the publication is indeed the subject of the present claims. At best the publication could be said to allude to the invention, but it does not provide enabling disclosure nor put the public in possession of the invention. Thus to the extent the Zancopé-Oliveira et al. is being used as a printed publication or as evidence that the invention was known, it fails to meet the requirements under 35 USC 102(a) for failing to be an enabling disclosure.

Additionally, applicants respectfully point out that the cited publication represents the applicants’ own work as every author listed is also an inventor. The finding in *Applied Materials, Inc. v. Gemini Research Corp.*, stands for the proposition that a disclosure (in that case a patent application) which discloses a later claimed invention, shows that the invention was invented before the disclosure date. In that case, because the disclosure was by the inventors only, it was evidence of the invention thereof by the applicants of the later-filed application. *Applied Materials, Inc. v. Gemini Research Corp.*, 835 F.2d 279, 5, USPQ2d 1127 (Fed. Cir, 1987) reh’g granted, opinion modified, 15 USPQ2d 1816 (Fed. Cir.1988). Similarly in the event

that the cited reference fully discloses the invention claimed in the present application, the cited art could not be 102(a) prior art as it shows that the invention was invented before the publication date of the citation.

Moreover, *In re Land* (54 C.C.P.A. 806; 368 F.2d 866; 151 USPQ (BNA) 621 (1966 CCPA)) (Attached herewith as Exhibit A) stands for the proposition that inventor A can not be “another” to co-inventors A+B with respect to the invention of A+B. Thus, the disclosure of the invention of A+B in the publication of A is not prior art because the invention of A+B can not be published before it is conceived (invented) and A is not “another” to the invention of A+B (see page 630 paragraph 8 through page 633 paragraph 14). In particular, it is the opinion of the court as shown in *In re Land* is that “[w]hen the joint and sole inventions are related, as they are here, inventor A commonly discloses the invention of A&B in the course of describing his sole invention and when he so describes the invention of A&B he is not disclosing “prior art” to the A&B invention, even if he has legal status as ‘another’” (page 633, paragraph 13). In the present application, the reference Zancopé-Oliveira et al. is being cited for the disclosure of the existence of a sequence to the M antigen of *H. capsulatum*. The sequence of *H. capsulatum* M antigen is the subject matter of the claims at issue. Furthermore, the sequence of *H. capsulatum* M antigen is the invention of Rosely M. Zancopé-Oliveira, Leonard W. Mayer, Errol Reiss, Timothy J. Lott, and George S. Deepe Jr. Thus, the Zancopé-Oliveira et al. disclosure does not represent the work of others as all of the authors of Zancopé-Oliveira et al. are also inventors of the present application and, therefore, not “another” for the presently claimed invention nor could the publication have taken place prior to the conception of the invention. Therefore, Zancopé-Oliveira et al. can not anticipate the invention disclosed in the present application.

In order to further prosecution of the rejected claims, applicants submit herewith a declaration from Dr. Timothy Lott under 37 CFR 1.132 stating that the relevant subject matter disclosed in Zancopé-Oliveira et al., i.e., the subject matter of claims 1-9, 16- 20, 31-33, and 45-49, is the invention of Rosely M. Zancopé-Oliveira, Leonard W. Mayer, Errol Reiss, Timothy J. Lott, and George S. Deepe Jr. Thus the Zancopé-Oliveira et al. reference is not prior art because

the relevant subject matter is not the invention of another. Applicants believe this rejection to be overcome and respectfully request its withdrawal.

Claims 1, 4-9, and 45-49 are rejected under 35 U.S.C. § 102(b), for allegedly being anticipated by Stryer (BIOCHEMISTRY 3rd edition, New York, 1988, page 72). The Examiner's rejection is based on the term "fragment" being interpreted to include a single nucleic acid, and thus is anticipated by Stryer for the disclosure of Adenine, Guanine, Thymine, and Cytosine. To further clarify the claims, applicants have amended the claims to move the limitation of "*H. capsulatum* M antigen-specific" from the preamble of to the body of the claim. As amended, the claim states that the nucleic acid of the claim must be "*H. capsulatum* M antigen-specific," any anticipatory sequence must also be specific to the M antigen of *H. capsulatum*. Stryer does not disclose any such sequence. Nor does Stryer disclose SEQ ID NO: 1.

The Examiner asserts that this limitation has been met because, in the words of the Examiner, the "Stryer is a 100% match to a 'fragment' of SEQ ID NO:1," again asserting that fragment can include single nucleic acids. Thus, the Examiner deems the structure disclosed by Stryer to be specific for *H. capsulatum*. However, this interpretation is dependent on a "fragment *H. capsulatum* M antigen-specific" as including single nucleotides wholly ignores the plain meaning of "specific" as used in this context. Applicants respectfully assert that this is improper. Because single nucleic acids would be a 100% match for any single nucleic acid from any sequence and bind to any nucleic acid encoding any antigen, they can not be *H. capsulatum* M antigen-specific as required by the claims and as provided by the definition of "specific to" on page 15 of the specification. In particular, page 15, lines 18-23 relate to nucleic acids and states that "[t]he phrases 'specific to' and 'unique to' the fungus *H. capsulatum* as used herein in relation to a nucleic acid or nucleic acid fragment means a nucleic acid or nucleic acid fragment which is not common to other related fungi or other microorganisms (i.e., it is only present in the fungus *H. capsulatum*)" [emphasis added]. For example, although a single Adenine, Guanine, Thymine, or Cytosine nucleic acid may bind a nucleic acid encoding *H. capsulatum* M antigen, the same nucleic acid would also bind to all other nucleic acids and therefore would not be

specific. Applicants remind the Examiner that claims must be read in light of the specification and terms used in the claims must be read with deference to the definitions of said terms provided in the specification.

Furthermore, there are numerous examples in the published literature of the use of “specific” cpmisistent with applicants definition and with their use of this term in the present claims.

Clearly, single nucleic acids can not be found to only be present in *H. capsulatum* as required by the specification in order for a nucleic acid to be “specific to” *H. capsulatum*. Thus, no reading of Stryer can create a situation in which Stryer anticipates the claim. Applicants believe this rejection to be overcome and respectfully request its withdrawal.

Claims 1, 4-9, 16, 18- 20, 31, 33, and 45-49 are rejected under 35 U.S.C. § 102(e), for allegedly being anticipated by Lee et al., U.S. Patent No. 5,693,501 (the ‘501 patent). The Examiner contends that the claims of the present application comprise a nucleic acid comprising SEQ ID NO:1, substantially the same as SEQ ID NO: 1, and fragments of SEQ ID NO:1. The Examiner then contends that the sequences disclosed in the ‘501 patent are substantially the same as SEQ ID NO:1. Applicants respectfully point out that the ‘501 patent does not disclose any sequence of the M antigen of *H. capsulatum* or its complement or any fragment thereof. Rather, it discloses sequences of the *H. capsulatum* rRNA gene internal transcribed spacer region I (ITSI). The Examiner’s basis for this rejection revolves around the incorrect interpretation of the phrase “substantially the same as” and “fragments.” As previously discussed, the phrase “substantially the same as” has eliminated from the claims. Additionally, for reasons stated above, the term “*H. capsulatum* M antigen-specific fragment” can not be applied to single nucleotides or fragments that are not found only in the M antigen of *H. capsulatum*. Thus, the ‘501 patent cannot anticipate any of the claim of the present application. Applicants believe this rejection to be overcome and respectfully request it be withdrawn.

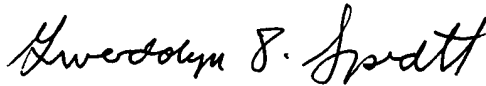
Pursuant to the above amendments and remarks, reconsideration and allowance of the pending application is believed to be warranted. The Examiner is invited and encouraged to

ATTORNEY DOCKET NO. 14114.0325U2
APPLICATION NO. 09/674,195

directly contact the undersigned if such contact may enhance the efficient prosecution of this application to issue.

No fee is believed due; however, the Commissioner is hereby authorized to charge any additional fees which may be required or to credit any overpayment to Deposit Account No. 14-0629.

Respectfully submitted,




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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to:
MAIL STOP AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date indicated below.


Gwendolyn D. Spratt

5-11-07
Date



ATTORNEY DOCKET NO. 14114.0325U2
Serial No. 09/674,195

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of)	
)	
Zancopé-Oliveira et al.)	
)	Group Art Unit: 1645
Serial No. 09/674,195)	
)	Examiner: Navarro, Albert M.
Filed: August 3, 2001)	
)	Confirmation No. 3262
For: "NUCLEIC ACIDS OF THE M ANTIGEN)	
GENE OF <i>HISTOPLASMA CAPSULATUM</i> ,)	
ANTIGENS, VACCINES AND ANTIBODIES,)	
METHODS AND KITS FOR DETECTING)	
HISTOPLASMOSIS")	

DECLARATION OF TIMOTHY J. LOTT UNDER 37 C.F.R. § 1.132

Commissioner for Patents
P.O. Box 1450
Washington, D.C. 20231

NEEDLE & ROSENBERG, P.C.
The Candler Building
127 Peachtree Street, N.E.
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Dear Sir:

I, Timothy J. Lott, a citizen of the United States, residing at 2836 Rangewood Terrace, Atlanta, GA 30345, declare that:

1. I am a co-inventor with Rosely M. Zancopé-Oliveira, Leonard W. Mayer, Errol Reiss, and George S. Deepe Jr., of the above-referenced patent application and of the subject matter described and claimed therein.

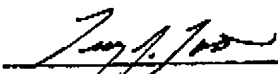
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Serial No. 09/674,195

2. I am co-author of the publication by Rosely M. Zancopé-Oliveira, Leonard W. Mayer, Errol Reiss, and Timothy J. Lott entitled Zancopé-Oliveira et al. (1997) in *Abstracts of the 97th General Meeting of the American Society of Microbiology* p. 266, F-35.

3. I understand that the Zancopé-Oliveira *et al.* reference is been applied in a rejection against claims 1-9, 16- 20, 31-33, and 45-49 of the above referenced application. Specifically, I understand that the reference to the existence of a sequence to the M antigen of *H. capsulatum* in Zancopé-Oliveira *et al.* is being applied in a rejection against claims 1-9, 16- 20, 31-33, and 45-49 of the above referenced application.

4. Rosely M. Zancopé-Oliveira, Leonard W. Mayer, Errol Reiss, George S. Deepe Jr., and I are the co-inventors of the subject matter of claims 1-9, 16- 20, 31-33, and 45-49 of the above referenced application. The sequence of the M. antigen of *H. capsulatum* (the subject matter described in the Zancopé-Oliveira *et al.* reference) was invented by Rosely M. Zancopé-Oliveira, Leonard W. Mayer, Errol Reiss, George S. Deepe Jr., and me.

5. I further declare that all statements made herein are true, and that all statements made on information and belief are believed to be true; and further, that these statements were made with the knowledge that willful false statements and the like are punishable by fine or imprisonment or both, under § 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or document or any patent issuing therefrom.



Timothy J. Lott

5/10/04
DATE

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sale which is deemed to be made in the state of acceptance (herein Texas) but should be given a broader application to include the successful solicitations of sales of the accused item in a judicial district even though they are accepted in another state. Union Asbestos & Rubber Company v. Evans Products Company, 328 F.2d 949, 140 USPQ 634.

Moreover, when the sales representative of defendant effects the sale of the accused valve to a customer in this judicial district followed by the use of the same herein by the customer, it is believed that such would constitute actively inducing infringement of the accused valve by the defendant in this judicial district. Leeson Corp. v. Cotton Mfg. Corp., Judson Mills Div., 201 F.Supp. 472, 133 USPQ 89. Therefore, the Court finds and concludes that the defendant has committed an act of infringement in this judicial district with reference to the accused valve involved.

[4] However, with reference to the other requirement that the defendant has "a regular and established place of business" in this judicial district, the Court finds and concludes that the defendant does not have a regular and established place of business in this judicial district within the intent, purpose and meaning of 28 U.S.C. § 1400(b). The facts of having a service agent and being licensed to do business in Oklahoma are not controlling. E. H. Sheldon & Company v. Norbute Corporation, 228 F.Supp. 245, 140 USPQ 651. Nor may the familiar test of "doing business" be substituted for the test of a "regular and established place of business." Knapp-Monarch Co. v. Casco Products Corp. et al., 342 F.2d 622, 145 USPQ 1, cert. denied 382 U.S. 828, 147 USPQ 540.

[5] The activities of the sales representative of defendant as outlined above fall far short of constituting or creating a "regular and established place of business" in this judicial district of the defendant within the meaning, purpose and intent of said statute. General Radio Co. v. Superior Electric Co., 293 F.2d 949, 130 USPQ 374; Knapp-Monarch Co. v. Casco Products Corp., supra; Clearsite Headwear Inc. v. Paramount Cap Mfg. Co. 204 F.Supp. 4, 133 USPQ 334. Brevil Products Corp. v. H & B American Corporation, 202 F.Supp. 824, 133 USPQ 434; McGah v. V-M Corporation, 166 F.Supp. 662, 120 USPQ 8.

[6] As to the OCT Division and its office in this judicial district the question is more difficult. At first blush this would seem to satisfy the venue

statute. But this is a special patent venue statute and a consideration of the history of patent venue, this statute, its predecessor statute and the apparent purpose and intent of the present statute, leads the Court to the conclusion that this requirement is lacking in this case notwithstanding the defendant has another Division with a regular and established place of business in this judicial district. The former patent venue statute allowed suit wherever the offender could be served. The present statute was intended to narrow or restrict this venue.

In considering the present venue statute, the United States Supreme Court in *Schnell v. Peter Eckrich & Sons, Inc.*, 365 U.S. 260, 128 USPQ 305, 306, 307, refused to give the same a liberal construction with this language:

"The requirement of venue is specific and unambiguous; it is not one of those vague principles which, in the interest of some overriding policy, is to be given a 'liberal' construction."

The Court in *Schnell* went on to state the purpose of the special venue statute:

"As is pointed out in the cases, Congress adopted the predecessor to § 1400(b) as a special venue statute in patent infringement actions to eliminate the 'abuses engendered' by previous venue provisions allowing such suits to be brought in any district in which the defendant could be served."

In *Morse v. Master Specialties Co.*, 239 F.Supp. 641, 144 USPQ 528, 529, the Court discussed the purpose of the present special patent venue statute as follows:

"The Congress has sought to lay the venue in the area where the defendant resides or has a regular and established place of business so as to facilitate the production and investigation of books, records and other data necessary to the discovery and trial technique employed in the patent field."

In *Ruth v. Eagle-Picher Company*, supra, it was held, 106 USPQ at 255:

"The patent venue statute, as construed in *Stonite Products Co. v. Melvin Lloyd Co.*, 315 U.S. 661, 62 USPQ 507, reflected a sound policy of long standing. It was based on considerations of practicality and convenience in such litigation. A patent infringement action involves a peculiar combination of science or technology

3 Section 48 of the Judicial Code of 1911.

and law. In the ascertainment of the pertinent technical facts, it is important that the trial judge have firsthand visual and audible knowledge of the conditions, the environment and the art itself and the testimony of the most competent witnesses. Practicality and convenience are best served when the case is prosecuted where the alleged acts of infringement occurred and the defendant has a regular and established place of business.

An intention on the part of Congress to depart from that policy should not be lightly inferred."

It is therefore concluded that for the special purpose of patent infringement venue, the OCT Division office of the defendant in this judicial district, which Division and office has absolutely nothing to do with the accused valve or its manufacture, sale, service or distribution here or anywhere else, will not satisfy the requirement of said special patent venue statute that the defendant have "a regular and established place of business" in this judicial district. It is the opinion of the Court that there must be some reasonable or significant relationship between the accused item and any regular and established place of business of the accused in the judicial district.

[7] Accordingly, the defendant's Motion to Dismiss for lack of venue is well taken and this suit must be dismissed or, by the authority of 28 U.S.C. § 1406(a), be transferred to the United States District Court for the Southern District of Texas, Houston Division. Since this suit was instituted in this Court, the defendant has brought a declaratory judgment action covering the same subject matter in the United States District Court for the Southern District of Texas, Houston Division. It is believed that the interest of justice requires that this case be transferred to the United States District Court for the Southern District of Texas, Houston Division, where a consolidation may be effected and the matter heard and decided. *Goldlawr, Inc. v. Heiman*, 369 U.S. 463; *E. H. Sheldon & Company v. Norbute Corporation*, supra.

It is therefore ordered that this case be transferred to the United States District Court for the Southern District of Texas, Houston Division, and that the Clerk of this Court take the necessary action to accomplish the transfer.

Court of Customs and Patent Appeals

In re LAND AND ROGERS

Appl. No. 7488 Decided Nov. 23, 1966

PATENTS

1. Double patenting—In general (§ 33.1)

Double patenting is normally applied as ground of rejection when patent used to support double patenting rejection is not available as reference to show prior art under 35 U.S.C. 102 or 103.

2. Court of Customs and Patent Appeals—Issues determined—Ex parte patent cases (§ 28.203)

In absence of appeal on specific claim, question of its patentability is not before court on the merits; however, since Patent Office brief questions applicants' statement that claim was allowed, court considers whether it was allowed on basis of what court finds in the record.

3. Double patenting—Tests of (§ 33.9)

Patentability—Invention—In general (§ 51.501)

From standpoint of analyzing obviousness of inventions of applicants' claims, it is correct to state that question is whether differences between such claims and patent claims are directed to unobvious variations or improvements; however, obviousness question in double patenting rejection, based on patent claims plus other art, is not an issue under 35 U.S.C. 103; it is not a statutory issue; section 103, as such, is not involved in double patenting rejection.

4. Double patenting—In general (§ 33.1)

Double patenting rejection is narrower than rejection on prior art inasmuch as rejection must be on the patent claims, or what has already been patented, plus other art if desired, rather than on patent's disclosure as in prior art rejection.

5. Board of Appeals—Procedure after hearing or decision (§ 19.40)

Court of Customs and Patent Appeals—Issues determined—Ex parte patent cases (§ 28.203)

After Patent Office solicitor noted that applicants' notice of appeal stated that Board of Appeals had not refused specific claim, it would have been appropriate for solicitor to have inquired of Board what its intended action had been, in case he had doubts

of it; it was inappropriate for solicitor to raise issue before court and then to argue that court cannot deal with it because no reason of appeal brought it before court.

6. Patentability — Anticipation — Patents—On pending applications (\$51.2219)
Patentability — Invention — In general (\$51.501)

Patents otherwise available as references may be used singly or combined as of their United States filing dates to support rejections under 35 U.S.C. 103 though copending with application at bar.

7. Court of Customs and Patent Appeals—Issues determined—Ex parte patent cases (\$28.203)

Generally, court declines to consider questions which could and should have been raised in Patent Office so that court may have views of its trained personnel on matters within their special competence and so that Office has opportunity to furnish its position as expert on technical questions, the interpretation of references, applications, and the like; however, court considers a question of law, such as availability of a reference, which is necessary to determination of patentability.

8. Patentability — Anticipation — Patents—On pending applications (\$51.2219)

"Another" in 35 U.S.C. 102(e) means another than "the applicant."

9. Patentability — Anticipation — Patents—On pending applications (\$51.2219)

Patentability—Invention—In general (\$51.501)

Disclosure of reference is available as prior art under 35 U.S.C. 102(e) to support rejection under section 103 whether or not disclosed subject matter is claimed.

10. Patentability—Anticipation — Patents—On pending applications (\$51.2219)

Patentability—Invention—In general (\$51.501)

So-called rejection under 35 U.S.C. 102(e) is equally predicated on lack of novelty and section 102(a) if reference fully describes the invention; if it is only partially described, because of a difference, it is based on section 103 into which must be read the prior art outlined in section 102 which supplies the evidence of obviousness; in the first case the evidence shows that invention was old and in the second that

it was obvious, at time that applicant made his invention; rejection is based on section 102(a) or 103, however; section 102(e) merely makes the evidence in the form of a "reference patent" available.

11. Patentability — Anticipation — Patents—On pending applications (\$51.2219)

Patentability — Anticipation — Prior knowledge, use or sale (\$51.223)
Patentability—Invention—In general (\$51.501)

Significant words in 35 U.S.C. 102(a) are "known or used by others * * * before the invention thereof by the applicant"; parallel words in section 102(e) are "application for patent by another * * * before the invention thereof by the applicant"; real issue is whether all the evidence, including the references, shows knowledge by another prior to time applicants made their invention; it is a question of fact.

12. Affidavits — Anticipating references (\$12.3)

Patentability — Anticipation — Patents—On pending applications (\$51.2219)

Patent Office Rule 131 is only one way of overcoming a reference; Rule does not restrict applicant to compliance with its specific terms as only way to demonstrate that reference, does not disclose knowledge by "others" prior to applicant's invention but discloses, instead, knowledge by others of applicant's own invention acquired after he made it; this is compatible with novelty and unobviousness of applicant's invention under 35 U.S.C. 102 and 103, notwithstanding its disclosure in "reference" patent having a filing date earlier than applicant's; there is no necessary relation between order of making inventions and the order of filing applications on them.

13. Applicants for patent — Who may apply (\$14.7)

Patentability — Anticipation — Patents—On pending applications (\$51.2219)

In the sense that invention made jointly by A & B cannot be sole invention of A or B or vice versa, they are different "entities" and certain legal consequences flow from such fact, such as who must apply for a patent; however, when joint and sole inventions are related, and where A discloses invention of A & B in course of describing his sole invention, when he so describes invention of A & B, he is not disclosing "prior art" to A & B invention, even if

he has legal status as "another" (35 U.S.C. 102(e)).

14. Patentability — Anticipation — Patents—On pending applications (\$51.2219)

Conditions expressed in 35 U.S.C. 102(e) are (1) that application for reference patent must have been by one who is legally "another" and (2) that filing date must be before invention by applicant; when section 102(e) reference patentee got knowledge of applicant's invention from him, as by being associated with him, or had knowledge of joint applicants' invention by being one of them, and thereafter describes it, he necessarily files application after applicant's invention date and the patent as a "reference" does not evidence that invention, when made, was already known to others; evidence of such a state of facts, whatever its form, must be considered.

15. Patentability — Anticipation — Patents—On pending applications (\$51.2219)

Remark in In re Blout, 142 USPQ 173, that R was not "another" to B and R, was unfortunate; true basis of decision that R patent was not properly a reference against B and R was that evidence showed that alleged anticipatory disclosure in R patent was a description of B and R joint invention, not the invention of another; in that sense only, R was not "another," but as a patentee, of course, he was; however, disclosure relied on was not his invention, or that of a third party, but the invention of B and R which, as against them, could not be prior art.

16. Patentability — Anticipation — Patents—On pending applications (\$51.2219)

Patentability — Anticipation — Publications—In general (\$51.2271)
Applicant's copending applications or publications are not prior art to him; thus, if reference patent was based on copending joint L and R application, it would be unavailable as reference against instant joint L and R application since reference would not be that of "another."

17. Patentability — Anticipation — Patents—On pending applications (\$51.2219)

It is in accord with weight of authority to regard L and R individually as separate legal entities from L and R as joint inventors, as they would be regarded relative to each other if a L application were rejected on a R copending patent; disclosures in individual L

and R copending applications (on which patents issued) of their individual inventions are part of prior art against L and R application, there being no indication that portions of L and R patents relied on disclose anything that L and R did jointly or that what they did jointly was before filing of applications for L and R patents.

18. Claims — Functional — In general (\$20.451)

Fact that "adapted to be rendered diffusable" and "only after at least substantial development" are functional is no reason why they should not be given weight in view of third paragraph of 35 U.S.C. 112; giving them weight, and so limiting claims to actual invention disclosed, claims are allowed.

Particular patents—Photography Land and Rogers, Photographic Color Processes, claims 53, 66, 70, and 71 of application allowed; claims 52, 54, 55, 58 to 61, 63, 64, 67 to 69, 73 to 76, 78 to 86, and 90 refused.

Appeal from Board of Appeals of the Patent Office.

Application for patent of Edwin H. Land and Howard G. Rogers, Serial No. 565,135, filed Feb. 13, 1956; Patent Office Group 170. From decision rejecting claims 52 to 55, 58 to 61, 63, 64, 66 to 71, 73 to 76, 78 to 86, and 90, applicants appeal. Reversed as to claims 53, 66, 70, and 71; affirmed as to remaining claims; Worley, Chief Judge, dissenting in part with opinion.

DONALD L. BROWN (STANLEY H. MERVIS of counsel) both of Cambridge, Mass., for appellants.

CLARENCE W. MOORE (JACK E. ARMORE of counsel) for Commissioner of Patents.

Before WORLEY, Chief Judge, and RICH, MARTIN, SMITH, and ALMOND, Associate Judges.

RICH, Judge.

This appeal is from the decision of the Patent Office Board of Appeals affirming the examiner's rejection of thirty claims of application serial No. 565,135, filed February 13, 1956, entitled "Photographic Color Processes." The claims on appeal define both processes and products and are numbered 52-55, 58-61, 63, 64, 66-71, 73-76, 78-86, and 90. The product claims are 69-71 and 82-86. The others are process claims.

The Proceedings Below

The proceedings in the Patent Office were unusual. Appeal was taken to the board from the final rejection and the

examiner filed his answer. After the hearing, the board remanded the case to the examiner "for clarification of his position." The board said, "We do not have the benefit of the examiner's views as to the application of the references to each claim, noting that process and product claims of varying scope and different species are presented." A second Examiner's Answer was filed, going into much greater detail as to the grounds of rejection. Appellants then filed two amendments and had an interview. The examiner entered the amendments "since they materially reduce the issues on appeal" and filed a third Answer in which it was noted that several claims had been cancelled since the original appeal and that other claims had been amended so as to obviate any question of the claims on appeal reading directly on certain references so as to be anticipated, i.e., fully met.

The references relied on throughout all three Answers and by the Patent Office Solicitor here are:

White 2,350,380 June 6, 1944
Yutzky 2,756,142 July 24, 1956 (Filed Jan. 22, 1953)
Rogers 2,774,668 Dec. 18, 1956 (Filed May 28, 1953)
Land (sole) 2,968,554 Jan. 17, 1961 (Filed Aug. 9, 1954)
Rogers (sole) 2,983,606 May 9, 1961 (Filed July 14, 1958) (Parent applications filed Mar. 9, 1954 and June 23, 1955, now both abandoned)

The patentees Land and Rogers are the appellants. Since two Rogers patents are cited, we will distinguish them as '668 and '606.

In the third and last Answer, the examiner summarized the situation thus:

The sole issue which appears to remain is whether the appealed claims recite obvious subject matter over Land ('554) or the claims or disclosure of Rogers ('606) in view of White, Rogers ('668) or Yutzky.

As a matter of interest, Land and Rogers, individually and jointly, are assignors to Polaroid Corporation, White to E. I. du Pont de Nemours & Company, and Yutzky to Eastman Kodak Company, and are all leading inventors in the field of photography to which the present invention relates.

Following the filing of the third Answer, the board rendered its decision. In the last quotation above it will be seen that the issue of obviousness, as the examiner concisely stated it in the alternative, was a two-pronged issue: (1) It was a 35 U.S.C. 103 issue; (2) as to

Rogers '606 plus the other references, it was also a "double patenting" issue of the type predicated on the *claims* of a patent to a common assignee (here Polaroid, assignee of the application at bar) considered with additional prior art alleged to render obvious the subject matter of the appealed claims in view of the claims of Rogers '606. In re Simmons, 50 CCPA 990, 312 F.2d 821, 136 USPQ 450, decided by us in 1963, is a typical "double patenting" case of that type.

[1] We here make the observation that "double patenting" is normally applied as a ground of rejection when the patent used to support the double patenting rejection is *not available* as a reference to show "prior art" under 35 U.S.C. 102 or 103. However, Rogers '606 was used in this case as a prior art reference, as of the filing dates to which it was entitled, the statute presumably relied on but not stated being 35 U.S.C. 102(e). In Simmons, the applicant's own prior patent could not be used as prior art under the statute and the rejection was therefore predicated on the theory of "double patenting." Here the applicants are Land and Rogers (jointly), and a principal reference is Rogers '606 (sole) plus other references. The existence of these different "legal entities," as the Patent Office calls them (Land and Rogers being one entity and Rogers '606 being another), is a factual distinction from Simmons bearing on the availability of Rogers '606, as well as Land, as prior art references against the joint Land and Rogers application, a disputed point considered later. For the moment we merely wish to point out that the examiner used Rogers '606 in a dual capacity as a primary reference to support both a rejection for obviousness over the *prior art* and a rejection for "double patenting" of the type involving an obviousness issue based on Rogers' claims. We point this out because it bears on the next question we wish to consider and dispose of before getting to the merits of the appealed claims.

The Questioned Allowance of Claim 56

Claim 56 is not on appeal. The reason it is not on appeal is that appellants thought it was allowed by the board. The reason they thought so is that the board said, "The decision of the examiner * * * is reversed as to claim 56." The docket branch of the Patent Office, in making up the record for this court, listed claim 56 as an "allowed claim." Appellants' brief so treats it. It states on page 1:

Claim 56 was allowed by the Board

of Appeals and is printed in the Record on page 203.

[2] According to the usual procedure, the Patent Office brief was prepared after the filing of appellants' brief and it takes issue with that statement. That is why we have before us the question, raised by the Patent Office Solicitor, whether the decision of the board did or did not allow claim 56. After devoting an inordinate amount of time at oral argument to this question, the solicitor suggests that on either of two theories claim 56 "is not before the court." The first theory was that if all rejections of claim 56 were in fact reversed, the claim is not before us. The second is that no appeal was taken on this claim, wherefore, it is not before us. Clearly, in the absence of an appeal on claim 56, the question of its patentability is not before us *on the merits*. We do consider, however, that since the Patent Office brief so insistently questions appellants' statement that the claim was allowed, we will consider whether or not it was allowed on the basis of what we find in the record.

This brings us to the fact that claim 56, like all other appealed claims, was rejected both as unpatentable over the prior art under section 103 and for "double patenting." Though not there so termed, the latter rejection originated in the final rejection where the wording of the rejection was, "unpatentable over either the disclosure of [or] the claims of one of the newly cited patents to Land and Rogers ['606] * * *." This was reiterated in the first Answer, commented on in the second Answer, with citation of authority, and dealt with at length in the third Answer, where the discussion begins and ends with these sentences (our emphasis):

The instant claims are not seen to recite a patentably distinct invention over the claims of Rogers ('606) in view of Yutzky. * * *

* * * For this reason, the present claims are not seen to be patentably distinct from Rogers ('606) in view of Yutzky. See *In re Simmons*, 136 USPQ 450, and *In re Zickendraht*, 138 USPQ 22 [50 CCPA 1529, 319 F.2d 225].

Zickendraht is another of our recent "double patenting" decisions, but is a quite different type of case from Simmons.

The solicitor's argument about claim 56 is based on his view that all the board did was reverse the section 103 rejection and, since it allegedly failed to

pass on "double patenting," that rejection still stands as to claim 56. We do not so read the record.

We first consider what the board itself said. Its opinion opens with the statement "No claim has been allowed." It affirmed the rejection of the examiner on prior art as to a long list of claims from which it omitted claim 56. It then took up that claim separately, discussed how it distinguished from the art and said:

In our view the art of record as applied by the examiner does not suggest the process of this claim. Accordingly, the rejection of claim 56 will not be sustained. [Emphasis ours.]

We note it made no distinction as to the legal theory on which the "art of record," which includes Rogers '606, failed to suggest the claim 56 process. We note that "the rejection" was not sustained. At the end of its opinion the board said:

We do not find it necessary to rule on the rejection of the claims on the ground of double patenting with respect to Rogers '606 since the disclosure relied upon, in the absence of a Rule 131 affidavit, is available as prior art.

It then summarized its decision as to all claims on appeal, ending with the statement, quoted above at the beginning of this discussion, that the decision of the examiner "is reversed as to claim 56." This seems to us a clear, specific statement. But this is not the end.

Appellants filed a request for reconsideration asking a specific ruling on the double patenting issue, saying that it "should be expressly thrown out since it only confuses the issues" which they intended to bring to this court. They pointed out that the examiner did not contend that appellants and Rogers '606 claimed the same invention, adding:

The question, then, is whether the differences between the claims on appeal and the claims of Rogers ('606) are directed to unobvious variations or improvements. This question is actually the same question presented in the art rejection under 35 U.S.C. 103.¹

[3] ¹ From the standpoint of analyzing the obviousness of the inventions of the appealed claims this is a correct statement. But we issue a word of warning that the obviousness question in this "double patenting" rejection based on patent claims plus other art, as here is not an issue under section 103; it is not a statutory issue, as pointed out in the con-

Appellants there had pointed out to the board that it had in fact reversed the rejection of claim 56 and added:

Since the Board of Appeals has allowed claim 56 to applicants, it can only be assumed that the rejection on double patenting was considered and reversed, at least with respect to claim 56. This implicit holding should be made explicit. [Emphasis ours.]

Thereby the board was advised of appellants' understanding of the board's action on claim 56. In ruling on the petition, which was denied, the board said "we * * * reversed the decision [sic] of claim 56," by which it could only have meant that it had reversed the decision of the examiner on claim 56. Generally, they added:

In rendering our decision we relied only on the disclosure of Rogers which was available as a reference prior to the filing date of the present application. * * *

Since we sustained the rejection on the broader basis of the available disclosure we did not then, nor do we now, feel compelled to render a decision based upon the narrower aspect [basis] of double patenting.

[4] As we view it, the board deemed Rogers '606, insofar as it had value as a reference, to be available as prior art and therefore saw no reason to utilize that patent under a "double patenting" theory, which is "narrower" in the sense that one cannot thus reject on the disclosure, as the board preferred to do, but must reject on the claims, or what has already been patented, plus other art if desired. Thus viewed, it is reasonable to assume that the board's view was that on any theory, including "double patenting," claim 56 distinguished from the references, including the claimed subject matter in Rogers '606, by defining an *unobvious* process. It should be remembered that Rogers '606 was used to support an *obviousness* type of "double patenting" rejection.

The solicitor's theories concerning what the board did appear to us to be groundless. When the board was told that it had allowed claim 56, not only did it not demur, it repeated that it had reversed the decision rejecting it.

[5] This issue is discussed in the solicitor's brief at the beginning, in the middle, and at the end. It is not a mere incidental observation. After noting the statement in appellants' Notice curing opinion in Zickendraht, *supra*. Section 103, as such, is not involved in the "double patenting" rejection.

of Appeal that the board decision appealed from had not refused a patent on the "subject matter defined by claim 56," it would seem to have been appropriate for the solicitor to have inquired of the board what its intended action had been, in case he had doubts about it. Furthermore, we deem it inappropriate for him to have raised the issue before us and then to have argued that we cannot deal with it because no reason of appeal brought it before us. This question was first raised in the Patent Office brief, filed long after the notice wherein the reasons of appeal are stated. 35 U.S.C. 142. We deem claim 56 to stand allowed.

The Invention

The invention relates to picture-in-a-minute" photography as popularized by Polaroid Corporation, more particularly to color photography. Before undertaking to describe it, we have considered whether to describe what is claimed, on the theory that the claims define what the invention is, or to describe what appears to be the invention from consideration of the oral argument and a reading of the specification and appellants' brief, on the theory the appellants can tell us through counsel what they have invented. In doing this, it appears impossible to arrive at a single concept of the invention, for different approaches lead to different results.² However, by setting aside the claims and the arguments specific thereto, a central theme emerges, stated at oral argument to be the gist of the invention, which seems to permeate the whole specification and to be generally agreed on by appellants and the Patent Office as the essence of the invention sought to be patented. One term for it is "de-

² The final rejection and first Examiner's Answer contained a rejection under 35 U.S.C. 112 on the ground certain claims, some of which are on appeal, failed to particularly point out and define the invention, and under the same section also contained an undue multiplicity rejection. This was repeated in detail in the second Answer. After an interview and two amendments, the nature of which the record does not disclose, which followed the second Answer, this rejection was abandoned in the third Answer. We nevertheless observe a considerable gap between the invention as described and the subject matter of the broader claims. What seems to have survived is a rejection on the ground such claims, apparently because of their breadth, define only *subject matter which would be obvious* from the prior art rather than the invention as described. The board having found claim 56, which does define the invention described, to be directed to *unobvious* subject matter.

ferred diffusion." We merely name it here and will describe it later. It is first necessary to understand the general nature of the photographic process and products in which it occurs.

The photographic color process here involved is known as diffusion transfer and we describe it in connection with a three-color process. (Two-color processes may be used.) There is a multi-layer "negative" element, sometimes called a "monopack," consisting of a film base on which there are three photosensitive layers or silver halide emulsions, sensitized to different portions of the visible light spectrum. Associated with each is a color-providing substance which may be either a colored material itself, such as a dye, or a material which will react chemically to produce a dye. Associated with the monopack negative, usually after it has been exposed to the subject photographed, is an image-receiving layer to which some of the three colors from the negative may be transferred, "image-wise," after development of the negative, by a sort of blotting-paper action known as imbibition, it being understood that at the time of development and transfer the negative and image-receiving layer are in close face-to-face relation.

The monopack negative, broadly old, is constructed generally as follows. On the film support or base there is, first, a layer of red-sensitive silver halide emulsion associated with a cyan image dye. Next, there is a green-sensitive emulsion associated with a magenta image dye. On top of these layers is a blue-sensitive emulsion associated with a yellow image dye. Separate dye layers may underlie the photosensitive layers or the dye may be placed therein. The three photosensitive layers are exposed simultaneously through the camera lens and, upon development, negative images are produced, these images recording, respectively and separately, the blue, green, and red portions of light emanating from or reflected by the scene photographed.

The characteristic of this type of process is that where the silver halide has been exposed to light to which it is sensitive it can develop to produce the negative image. In doing so it acts chemically to immobilize the dye or color-former associated with it to the extent that it has been exposed. Conversely, where it has not been exposed to light it leaves the color-providing substance mobile and free to diffuse to the image-receiving layer to which it transfers, hence the name "diffusion transfer." The three colors are thus im-

bited by said layer in different amounts or "image-wise" and, being superposed, produce a positive color photograph by making three color-separation printings in registration on the same sheet. This is, of course, a crude description intended only to give a general idea of what happens and the monopack is actually more complex. It may contain other layers such as barrier layers, light filtering layers, etc.

The process employed is a "subtractive" color process, the blue-sensitive layer producing the yellow (minus blue) dye, the green-sensitive layer producing magenta (minus green), and the red-sensitive layer producing cyan (minus red) which, when combined, form the positive image. Thus it is that the negative produces a positive, substantially simultaneously with its development.

Development of the negative and transfer of the image-forming color-forming materials are produced, as in the previously known Land-Polaroid monochrome technique, by a single liquid processing composition which is contained in a pod associated with each picture unit of the film and adapted to be ruptured, the liquid being spread across the opposed faces of the negative and image-receiving layers when they are squeezed between rollers usually forming part of the camera. After allowing the proper time for processing, the image-receiving layer is stripped from the negative. The processing liquid is adapted to activate the rather complex chemicals which may be carried in a dry state in the monopack, and possibly also in the image-receiving layer, which commence to function as they go into solution in said liquid.

A preferred color-providing material is known as a dye-developer which is both a dye, supplying the desired color for the positive image, and a developer for the silver halide light-sensitive element with which it is associated. The use of dye-developers appears to be the invention of Rogers and is described and claimed in his '606 patent which is a reference.³

While appellants' brief says they "have invented a novel and highly successful process for forming full color images by diffusion transfer" it is not

³ That patent states (col. 5) that the developing function can be insulated from the dye molecule, as disclosed in the application of Blout and Rogers, serial No. 485,840, filed Feb. 3, 1956. That application was here on appeal in *In re Blout and Rogers*, 52 CCFR 751, 333 F.2d 928, 142 USPQ 173 (1964). Blout and Rogers patent issued June 7, 1966. No. 3,255,001.

expressly stated that the success is to be attributed wholly to what is disclosed in the present application. It was stated at oral hearing that the present invention does not use any new element, material, or processing solution but resides in the combination of such old elements to produce a new result. We will now quote the passages from the specification which more fully explain the gist of the invention, deferred diffusibility (all emphasis ours):

As noted hereinabove, multicolor positive images are formed in accordance with this invention, by suitable control of the diffusibility or availability for diffusion of color-providing substances associated with or at least the inner photosensitive layer or layers to other photosensitive layers of an integral multilayer image-receiving element or to the image-receiving layer. This control of the availability of color-providing substances may be described as "deferred mobility," "deferred diffusibility," or "retarded mobility." Such control of the nonimmobilized color-providing substances is necessary to insure that they do not participate in the development of the latent color image in a photosensitive layer or stratum other than that with which they are associated. This is particularly essential where the nonimmobilized color-providing substance is capable of developing exposed silver halide. * * * Various mechanisms may be utilized to create the desired deferred diffusibility of the color-providing substances, and a particular integral multilayer photosensitive element may utilize the same or several different mechanisms for creating the desired deferred diffusibility in the several layers.

In general, it may be stated that the desired deferred diffusibility of color-providing substances may be obtained by two types of processing. In one, the latent color record images in the several emulsion layers are substantially simultaneously developed prior to the time the nonimmobilized color-providing substances in unexposed areas achieve the requisite diffusibility. In the second type of processing, the integral multilayer photosensitive element is processed layerwise, one emulsion layer being developed and the color-providing substances associated therewith, but not immobilized by development, rendered diffusible to the image-receiving layer substantially prior to the time development and diffusion

occurs in another layer. In certain instances, an integral multilayer photosensitive element may be so constructed as to utilize both types of processing techniques.

It may be helpful to note that since the whole object is to get a good color image with a single processing solution, spread just once between the monopak and the image-receiving layer according to the Polaroid method, the process which results depends entirely on the construction and the ingredients of the monopak and the image-receiving layer and the chemical make-up of the processing solution. Once they are so made as to accomplish the desired result, the process is inherent in them.

We here reproduce claim 52, stated to be the broadest of the process claims on appeal, the italicized portions being from appellants' brief which says they are the portions primarily relied upon to establish patentability. We have broken the claim into its three main process steps and have capitalized the key words of those steps. The reader who has followed our opinion thus far will be interested to note that the claim makes no mention of deferred diffusion, which should not be confused with imagewise immobilization, one of the italicized passages, though it is not contended there is anything new in it.

52. A process of forming positive transfer images in color comprising the STEPS of:

EXPOSING an integral, multilayer, photosensitive monopak element comprising a support carrying a plurality of continuous, coextensive, superposed photosensitive silver halide emulsion layers, each said emulsion having associated with it a color-providing substance selected from the class consisting of an image dye and an intermediate for said image dye, each said silver halide emulsion being sensitized to different portions of the spectrum,

DEVELOPING each of said emulsions, *immobilizing in developed areas, as a function of said development, said color-providing substance associated with each said emulsion thereby providing in undeveloped areas of each said emulsion an imagewise distribution of nonimmobilized, diffusible color-providing substance,*

TRANSFERRING by imbibition at least a portion of each of said imagewise distributions of nonimmobilized, diffusible color-providing substance to a single, superposed image-receiving layer to impart thereto a plurality of dye images, thereby pro-

viding a positive, multicolor image, said development and said transfer being effected by the application of a single liquid composition.

Allowed claim 56 and 12 other process claims depend from claim 52. It is illuminating to read the allowed claim:

56. A process as defined in claim 52, wherein said permeation of said integral multilayer, photosensitive element proceeds substantially layerwise, so that development of an outer emulsion layer is substantially completed and diffusion of the color-providing substance associated with undeveloped areas is at least partially completed prior to substantial permeation and development of the next inner emulsion layer by said liquid composition.

In allowing it, the board pointed out that it is limited to control of diffusibility by layerwise permeation, which, the board said, "the art of record * * * does not suggest * * *."

As appellants' brief correctly points out, the issues require an adjudication of the obviousness of each of the 30 appealed claims in view of the prior art but before we can do this we have to deal with Point 2 of that brief raising questions as to whether some of the references underlying the rejection are, in law, available as prior art. This question, as argued, falls into two parts.

What References are "Prior Art"—Part I

[6] This first aspect of the question involves the issue recently before the United States Supreme Court in *Hazeltine Research, Inc. v. Brenner*, 382 U.S. 262, 147 USPQ 429 (1966). The Land, Rogers '606, and Yutzy patents were all *copending* with the application on appeal. The statutory ground of rejection involved in this question is 35 U.S.C. 103 obviousness. Though appellants concede such references are "prior art" under section 102, they raised the old question of the contents of the unavailability of the contents of pending applications under 35 U.S.C. 122, the patents issuing thereon are available as prior art to show obviousness under section 103, as of their filing dates in the United States. See 35 U.S.C. 102(e). Appellants held this question open in their brief, filed May 7, 1965, because *Hazeltine* was then pending before the Supreme Court. December 8, 1965, the point was decided adversely to appellants. Patents otherwise available as references may be used singly or combined as of their U. S. filing dates to support section 103 re-

jections though *copending* with the application at bar. We so held in *In re Harry*, 51 CCPA 1541, 333 F.2d 920, 142 USPQ 164 (1964). With respect to this case, that makes Yutzy clearly available as a reference, no other question being raised as to its availability.

[7] As to the Land and Rogers '606 references, however, appellants raise the second part of the question about availability, based on our decision in *In re Blout and Rogers*, 52 CCPA 751, 333 F.2d 928, 142 USPQ 173 (1964). They admit that they did not argue this point of law before the board, nor could they have done so as *Blout and Rogers* was not decided until more than four months after the board decision. The solicitor's brief objects to our considering it on the usual ground that we do not generally consider points not raised below, citing *In re Herthel*, 36 CCPA 1095, 174 F.2d 935, 82 USPQ 55, *In re Panagrossi et al.*, 47 CCPA 904, 277 F.2d 181, 125 USPQ 410, and *In re Soli*, 50 CCPA 1288, 317 F.2d 941, 137 USPQ 797. We find nothing in those cases or in the two other cases cited in *Herthel* which precludes us from dealing with this point of law. In none of those cases was it a point of law that we declined to consider but rather such things as the interpretation of a word (*Herthel*), the factual significance of a claim limitation, a question of operability, the construction of a claim (*Panagrossi*), and the propriety of actions of the examiner to which response could have been made in the Patent Office (*Soli*). Generally speaking, we decline to consider questions which could and should have been raised in the Patent Office so that we have the benefit of the views of its trained personnel on matters within their special competence and so that the Patent Office has the opportunity to furnish its position as expert on technical questions, the interpretation of references, applications, and the like. We will nevertheless consider a question of law, such as the availability of a reference, which is necessary to the determination of patentability. In *re Schoenewaldt*, 52 CCPA 1258, 343 F.2d 1000, 145 USPQ 289, 290. Indeed, we believe we are in a position to interpret our own opinion in *Blout and Rogers* without the benefit of the views of Patent Office tribunals. The solicitor is just as free to argue his views as he is when they have been considered below. We therefore proceed to a consideration of the question raised.

What References are "Prior Art"— Part II Joint Applicants' Own Sole Patents

As we recently pointed out in *In re Hilmer*, 53 CCPA 1287, —, 359 F.2d 859, 879, 149 USPQ 480, 496 at [11],

Much confused thinking could be avoided by realizing that rejections are based on statutory provisions, not on references, and that the references merely supply the evidence of lack of novelty, obviousness, loss of right or whatever may be the ground of rejection.

The ground of rejection Land and Rogers '606 are cited to support is section 103 obviousness. These patents did not issue until several years after the instant application was filed.⁴ They are being used as references as of U. S. filing dates which antedate the joint applicants' filing date. The only basis for so using a U. S. patent is section 102(e):

A person shall be entitled to a patent unless—

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent * * *. [Emphasis ours.]

[S] "Another" clearly means an-

⁴ These two references were first cited in this application in the final rejection of June 7, 1961. The Land patent had issued about five months and the Rogers '606 patent about one month prior thereto. All claims were rejected on *three grounds*, the first two being initially stated as "unpatentable over either the disclosure or the claims of one of the newly cited patents to Land and Rogers." * * * this ground of rejection alone or further taken together with one of Martinez, the White patents, Rogers (668) and Yutzy." The examiner said he "found nothing patentable over the disclosure of these two patents to disfigure these entities." He cited no statute as the basis for this rejection or as warranting the use of the newly issued, newly cited patents as references. He merely justified it on the basis they were to "different inventive entities." He then proceeded at greater length to expound his rejection on the claims of either Land or Rogers '606, referring to the granting of the patents to the assignee of the present case and to "an extension of the patent monopoly." Though he never referred to double patenting, that must have been what he had in mind as the ground of rejection. The third ground, no longer asserted, was failure to comply with section 112 in failing to point out the invention. On the availability issue, we are concerned only with the section 103 rejection, not with double patenting.

other than "the applicant[s]." In the final rejection, the examiner appears to have assumed availability of the Land and Rogers '606 patents as *prior art* on the ground Land and Rogers, *individually*, were "another" with respect to the same persons as joint applicants. The first Answer took it for granted. The second Answer on the first remand merely pointed out the specific filing dates antedating that of the present application. The third Answer on the second remand to consider amendments again seems to have assumed availability as prior art and the board clearly did likewise. Additionally, in explaining why it found it unnecessary to rule on the double patenting rejection, which the examiner had retained throughout the board made the express statement that the portion of Rogers '606 relied on by it "is available as prior art." * This could only have been on the basis of filing date and based on section 102(e).

Subsequent to the board decision herein, we handed down our decision in *Blout and Rogers* wherein, on the facts there presented to us, we held *unanimously* that the Rogers sole '606 patent was "not properly a reference" against the *Blout and Rogers joint application* filed February 3, 1955, which was after the March 9, 1954, filing date there accorded to Rogers '606 for the disclosure relied on but more than six years prior to the issuance of Rogers '606. We also commented that the same Rogers, one of the joint applicants, was not "another" within the meaning of section 102(e), though the opinion does not expressly refer to the statute except by quoting that key word from it in the course of discussing the dispute in that case, which revolved around "Rule 131 affidavits."

[9] The solicitor seeks to distinguish *Blout and Rogers* on the ground that in that case the portion of Rogers '606 relied on was *not claimed* and that we held the unclaimed matter was not prior art whereas here (a) it is not alleged the subject matter relied on is not claimed and (b) in point of fact it is claimed. We see no legal significance in these alleged distinctions with respect to a section 103 rejection. Claiming in the reference has relevance.

⁵ This was because the Rogers '606 specification had originated in various parent applications with different filing dates. The final application was filed after applicants filed July 14, 1958, but as a continuation-in-part of others filed March 9, 1954, and June 29, 1955, prior to applicants' filing date. The last two are the filing dates used.

on a double patenting issue but it has been settled ever since *Alexander Milburn Co. v. Davis-Bourbonville Co.*, 270 U.S. 390 (1926), wherein the rule of section 102(e) originated, that the disclosure in the reference is available as prior art whether or not the disclosed subject matter is claimed. See *In re Hilmer*, supra, at 149 USPQ pages 483 and 495. That is the only effort the Patent Office makes to distinguish *Blout* and we think it must fail.

As to the soundness of the *Blout* rule, appellants cite a number of cases showing that it is elementary that the pending application of the same inventor entity is not "prior art," namely, *In re Heinle*, 52 CCPA 1164, 342 F.2d 1001, 145 USPQ 131 (1965), *Weatherhead Co. v. Drillmaster Supply Co.*, 227 F.2d 98, 107 USPQ 184 (7th Cir. 1955), *Old Town Ribbon & Carbon Co. v. Columbia R. & C. Mfg. Co.*, 159 F.2d 379, 72 USPQ 57 (2d Cir. 1947),⁶ and *Ex parte Lemieux*, 1957 C.D. 47, 115 USPQ 148. In the last case the Board of Appeals, in a well-reasoned opinion, cited *Ex parte Powell* and *Davis*, 37 USPQ 285 (Bd. App. 1938), where it was held applicants' own British specification, published a few weeks before the filing of their application, was not prior art and concluded that subsequent legislation had not altered that rule, that the reference asserted to show prior art must disclose the work of someone other than the applicant. For two additional cases wherein this court recognized that rule, see *In re Land*, 27 CCPA 863, 109 F.2d 246, 44 USPQ 352, and *In re Land*, 27 CCPA 869, 109 F.2d 251, 44 USPQ 348 (1940), where the court said Land's own prior filed co-pending patent could be used only for what it claimed, i.e., in support of a rejection for double patenting.

There appears to be no dispute as to the law that A is not "another" as to A, B is not "another" as to B, or even that A&B are not "another" as to A&B. But that is not this case, which involves, as did *Blout*, the question whether either A or B is "another" as to A&B as joint inventors under section 102(e).

In *re Middleton* and *Reynolds*, 50 CCPA 1479, 319 F.2d 552, 138 USPQ 253, 259 (1963), is also discussed by appellants and the solicitor, the latter attempting to use it to take this issue from us on the ground *Middleton*

⁶ We believe this case is not in point on this issue because the Foster reference patent, which was copending, involved no inventor in common with the patentees of the patent in suit, *Lewis and Menihan*.

was decided prior to the board decision herein, and therefore this question could have been considered below. However, it is not a parallel case to *Blout*. The rejection there, of a *Middleton* and *Reynolds* application, was based on section 102(b), the *Middleton* sole patent being cited as a one-year time-bar by reason of its issuance a year before the joint applicants' filing date. We held it was not available as a reference for that purpose because the applicants were entitled to a filing date prior to the date of the patent. While our opinion quotes from *Lemieux* and makes some general statements about the invention of the reference being applicants' own, it is dictum and it is clear that neither the issue here nor section 102(e) was involved.

Dealing, as we are, with a section 103 rejection and with references in support of that rejection alleged to show prior art to appellants by virtue of section 102(e), it behooves us to consider the fundamental statutory basis of the rejection. In *Hilmer* we reviewed the history and meaning of section 102(e) (149 USPQ 480, at 494) and its origin in the *Milburn* case wherein *Whitford's* patent was invalidated on the ground that *Clifford's* patent, containing a full description of it earlier than any date of invention claimed by *Whitford*, was evidence that *Whitford* was not the first inventor. The statutory basis of that decision was that *Whitford's* invention was not patentable because "known * * * by others in this country, before his invention" (emphasis ours), under that part of R. S. 4886 which is now 102(a). The "other" in the *Milburn* case was *Clifford*, a total stranger to *Whitford*.

The salient fact in *Milburn* was that there was conclusive evidence that his invention was known to others before he claimed to have made it and there was no countervailing evidence at all. What he had invented lacked novelty, to put it one way, or he was not the first inventor, to put it another. The sole evidence was *Clifford's* patent application. If that application had said, in the course of describing another invention on which *Clifford* got his patent, that it was describing in addition an invention of *Whitford*, which would more resemble the case we had in *Blout*, it would not have been evidence that *Clifford*, or anyone else, knew the invention *Whitford* made before he made it. On the contrary, it would show *Whitford* made his invention before *Clifford* described it. We repeat what we pointed out in *Hilmer*, that the statutory basis for the finding of unpatentability in

Milburn was lack of novelty, as presently embodied in section 102(a). What Whitford claimed was known by others (Clifford, at least) before the date of his invention.

[10] In a rejection today under the 1952 Patent Act, a so-called "section 102(e) rejection" is equally predicated on lack of novelty and 102(a) if the reference fully describes the invention; if it is only partially described, because of a difference, then it is based on section 103 into which must be read the prior art outlined in 102 which supplies the evidence of obviousness. In the first case the evidence shows the invention was old and in the second that it was obvious, at the time the applicant or patentee at bar made his invention. The rejection is based on 102(a) or 103, however; 102(e) merely makes the evidence in the form of a "reference patent" available, as before 1953 the rule of the Milburn case made it available.

[11] The significant words in 102 (a) are "known or used by others" * * * before the invention thereof by the applicant" and the parallel words in 102 (e) are "application for patent by another" * * * before the invention thereof by the applicant" (emphasis ours). These are the key words on which resolution of the present problem turns. The real issue is whether all the evidence, including the references, truly shows knowledge by another prior to the time appellants made their invention or whether it shows the contrary. It is a question of fact.

On problems of this kind, thinking seems to have fallen into the following stereotype: A U. S. patent is a "prior art reference" under 102(e) as of its filing date; a "reference" can be overcome only by "swearing back" of it under Rule 131; Rule 131 requires a showing of facts which establish a reduction to practice before the date of the reference, or prior conception coupled with a reduction to practice by diligence; a patent to the same applicant or applicants is recognized as incapable of being such a reference because it does not show knowledge by "others" but a sole applicant or patentee and joint applicants or patentees are separate or different "legal entities" and either is treated as "another" relative to the other (until Blout and Rogers raised a question about it). Therefore, joint applicants A and B must "overcome" a reference patent to A or to B and the only way one can overcome a

"reference" is by complying with all of the requirements of Rule 131.⁷

[12] Rule 131, however, is only one way of overcoming a reference, as close reading of its language, and of broader Rule 132, will amply demonstrate. If Rule 131 is complied with, the reference "shall not bar the grant of a patent" but nothing is said restricting an applicant to compliance with its specific terms as the only way to demonstrate that a reference does not disclose knowledge by "others" prior to an applicant's invention but discloses, instead, knowledge by others of applicant's own invention acquired after—necessarily after—he made it. Such a state of facts is wholly compatible with the novelty and unobviousness of an applicant's invention under sections 102 and 103, notwithstanding its disclosure in a "reference" patent having a filing date earlier than the applicant's. There is no necessary relation between the order of making inventions and the order of filing applications on them.

We therefore approach the question of the availability of the Land and Rogers' '606 patents realistically for what it is, a problem of evidence and a question of fact as to what disclosure is relied on in support of the rejection and who invented the subject matter disclosed. We are not concerned with any affidavits under Rule 131 as there are no affidavits at all in this case, unlike Blout and Rogers. As in that case, however, we are dealing with inventors who worked closely together for their common assignee, Polaroid, and with a joint application rejected on patents issued to an individual inventor who is one of the joint inventors. The application and the reference patents all flowed from the same research out of

⁷ The only statement made by the board on this score was that Rogers' '606, "in the absence of a Rule 131 affidavit, is available as prior art." On rehearing, it repeated this dogma. In the Blout and Rogers case, supra, "Rule 131 Affidavits" were filed but ignored by the Patent Office because not deemed in full compliance with the rule. We deemed them sufficient, however, even though they did not comply with the rule, to show that the invention disclosed in Rogers' '606 was not that of "another" but that of Blout and Rogers, the applicants against whom the reference was cited. (See, however, footnote 10, infra.) In addition, the Rogers reference patent contained a clear cross-reference under Rule 79 to appellants' application with a statement of what they claimed as their invention, as distinguished from Rogers'. It appears at col. 5, lines 54-61 of the Rogers patent No. 2,983,606, the same reference which is being used herein.

the same laboratory, were prepared by the same attorneys, are complex, lengthy, interrelated, and contain extensive cross-references,⁸ a situation bearing no resemblance to the Milburn pending patents available as references, codified in section 102(e).

[13] The question here is not merely whether A or B, individually, is or is not "another" to A&B jointly on a theory of "different legal entities." Of course they are different "entities" in the sense that an invention made jointly by A&B cannot be the sole invention of A or B and vice versa, and certain legal consequences flow from such fact, such as who must apply for patent. But it is inescapable fact, too, that when A applies for a patent jointly with B he still has in his head all the information he had as an individual inventor A, the same being true of B. If as individuals they apply for patents on individual inventions during a period when they are working together on their joint inventions, they also have in their several heads full knowledge of what they have done jointly. When the joint and sole inventions are related, as they are here, inventor A commonly discloses the invention of A&B in the course of describing his sole invention and when he so describes the invention of A & B he is not disclosing "prior art" to the A&B invention, even if he has legal status as "another."

[14] In short, there are two conditions expressed in section 102(e): (1) the application for the reference patent must have been by one who is legally "another," and (2) the filing date must be "before the invention" * * * by the applicant * * *. When the 102(e) reference patentee got knowledge of the applicant's invention from him, as by being associated with him, or, as here,

⁸ The application at bar occupies 45 pages of printed record. Land 2,968,554 contains 36 columns. Rogers' '606 contains 34 columns. One table of other copending applications in the latter to which cross-reference is made for relevant disclosures contains 33 applications. Additionally there are cross-references to several other applications.

In Helene Curtis Industries v. Sales Affiliates, Inc., 233 F.2d 148, 109 USPQ 159 (2d Cir. 1956), faced with the problem whether McDonough was "another" as to patentees Evans and McDonough, the court recognized the question as one of first impression under 102(e) and, "in view of the policy considerations involved," refused to commit itself to the interpretation made below that the joint patentees were "another" as to the sole patentee.

had knowledge of the joint applicants' invention by being one of them, and thereafter describes it, he necessarily files the application after the applicant's invention date and the patent as a "reference" does not evidence that the invention, when made, was already known to others.¹⁰ Evidence of such a state of facts, whatever its form, must be considered.¹¹

What facts does the evidence here show and what is the evidence? Appellants' contention is:

Even if it be assumed that a copending patent is available as a reference under 35 U.S.C. 103 as of its filing date, it is believed that the Land '554 and Rogers' '606 patents are not available as references against any of the appealed claims, for they are not prior art as to appellants.

It is acknowledged by all that neither Land '554 or Rogers' '606 disclosed the here claimed invention prior to appellants' filing date.

We take this last stated fact to be implicit in the rejection for obviousness

[15] On reconsidering our opinion in Blout and Rogers, wherein it was remarked that Rogers is not another" to Blout and Rogers," we now think that remark to have been unfortunate. The true basis of our decision "that the Rogers patent is not properly a reference against Blout and Rogers" was that the evidence before us showed that the alleged anticipatory disclosure in the Rogers patent was a description of the Blout and Rogers joint invention, not the invention of another. In that sense only Rogers was not "another," but as a patentee, of course, he was. However the disclosure relied on was not his invention, or that of a third party as Milburn, but the applicants' own invention which, as against them, could not possibly be prior art.

The situation here dealt with was not before us in In re Bowers, 53 CCPA 1590, 359 F.2d 886, 149 USPQ 570 and should be regarded as a special exception to statements therein regarding the availability of references under 102(e).

¹¹ In re Stempel, Jr., 44 CCPA 820, 241 F.2d 755, 113 USPQ 77, was another case in which affidavits "under Rule 131" satisfactorily showed that what the reference disclosed was in fact the invention of Stempel, knowledge of which Amos et al. the reference patentees had acquired from him so that they were not disclosing knowledge by others prior to Stempel's invention. We accepted the affidavits as disposing of the reference even though the precise terms of Rule 131 were not met. As we now see the matter, the proper subject of inquiry was not compliance with Rule 131 but what the evidence showed as to who invented the subject matter disclosed by Amos et al. which was relied on to support the rejection.

under section 103. Appellants continue the argument:

Here we are concerned with a joint application of Land and Rogers rejected upon an earlier sole application of Land and an earlier sole application of Rogers. The fact that Land communicated the subject matter of the Land '554 patent to Rogers prior to the filing of Rogers' sole application is established by express cross-references to Land's 1950 application *** [three cross-references are here set forth] of the Rogers '606 patent. Thus, Land and Rogers jointly possessed, prior to the filing of their joint application, all of the disclosure in their respective sole applications which is relied upon by the Patent Office. Land and Rogers brought this knowledge with them when they made the invention jointly claimed here. *** Under these circumstances, it is submitted that appellants are here being rejected upon their own knowledge and disclosures, just as much as if the earlier filed sole applications had been joint applications.

[16] As we understand this last point, it is based on the justifiable assumption that if the reference were another joint Land and Rogers application, the rule would apply that an applicant's copending applications or publications are not prior art to him. In re Heinle, 52 CCPA 1164, 342 F.2d 1001, 145 USPQ 131, Ex parte Lemieux, 115 USPQ 148, and the reference would be unavailable as not that of "another."¹² As to evidence to show the determinative facts, appellants say:

While no formal affidavits have been filed in this application *** the oaths and formal cross-references in each of the sole and joint applica-

¹² It appears to be still an open question under 35 U.S.C. 103 whether the "prior art" therein referred to is not broad enough to include applicant's admissions about prior art, for example, where he shows or admits that an invention he desires to patent is an improvement upon one of his own inventions, the subject of another application or copending patent. Compare In re Simmons, supra, and consider what the situation would have been had the rejection been framed under section 103. Instead of based on "double patenting," on the premise that Simmons' invention was stated to be an improvement on apparatus on which he had filed an application more than a year earlier. The rejection would then be the obviousness of the improvements, which is the same question presented by the double patenting rejection. See also In re LoPrelli, 52 CCPA 755, 333 F.2d 932, 142 USPQ 176.

tions clearly set forth the facts as to who invented what.

The oaths of the reference patents are not of record and the oath of the application at bar is in usual form for an original application. They are not helpful. We find cross-references in the present application as amended to the application for the Land reference and to the Rogers '608 and '606 references. In Land we find no reference to this application. In Rogers '606 is a general description of and cross-reference to the subject matter of the instant joint application but this does not appear to be any part of the disclosure relied on to support the obviousness rejection. In this respect this case is different from Blout and Rogers.

[17] While, as the foregoing would indicate, there is much to be said on both sides of the question, our considered opinion is that Land and Rogers '606, on the facts of this case, should be regarded as prior art. It is certainly in accord with the weight of authority¹³ to regard Land and Rogers individually as separate legal entities from Land and Rogers as joint inventors, as they would be regarded relative to each other if a Land application were rejected on a Rogers copending patent. It seems to us that the disclosures in their individual applications of their individual inventions are part of the prior art and they seem to admit as much in saying that Land and Rogers brought their knowledge of their individual work, and of each other's work, with them "when they made the invention jointly claimed here." There is no indication that the portions of the references relied on disclose anything they did jointly. Neither is there any showing that what they did jointly was done before the filing of the reference patent applications.

Merits of the Obviousness Rejection

Against the background of the description of the invention, given earlier, we will very briefly indicate the nature of the reference disclosures relied on.

Land discloses a one-step color photography diffusion transfer process using a negative with emulsions sensitive to three colors, associated color-

¹³ See In re Ward, 43 CCPA 1007, 236 F.2d 428, 111 USPQ 101, and Ex parte Lindeman and Youngs, 107 USPQ 331 (Bd. App. 1955), although in the latter the cases cited do not appear to support the proposition, in particular this court's In re Beck, 33 CCPA 1060, 155 F.2d 388, 69 USPQ 520 (1946), in which there was no common inventor in the application and reference patent.

formers, and insulating layers, a single image-receiving layer, and a single processing solution delivered from a rupturable pod. The solicitor describes the negative as a "monopack" but this is misleading as it is not such a monopack as described above, utilized by appellants. Land's negative is a "screen," wherein the three layers are laid on the base in such a way as to form a grid or dots, each of the red-, green-, and blue-sensitive emulsions being exposed on the surface. At minute discrete areas on the negative it is possible to point to superposed layers of the three emulsions, as the examiner did in finding complete anticipation before the claims were amended to avoid it, but such layered areas are of minute dimensions considering that the screen is produced by applying strips of emulsion so narrow as to have 250 lines thereof per linear inch. The surface portions participate in picture production and underlying portions do not.

Rogers '606 is also a screen negative diffusion transfer, single processing liquid structure but contains other relevant disclosures. Rogers' contribution is in the use of dye developers. The specification contains frequent cross-references to Land. The portions relied on have to do with single-liquid processing, the mechanism of imagewise color immobilization, and the prevention of participation in color image formation of underlying emulsions and associated color substances which, in a screen negative, was considered undesirable. According to the present invention, on the contrary, it is of the essence of the process that all underlying layers do participate in image forming.

Yutzy discloses a process of obtaining a multicolor image by the transfer of color-yielding substances from a multilayer negative or monopack to a single image-receiving layer. He employs imagewise immobilization of color substance, as do all of these processes, but differs from Land, Rogers, and appellants' process in not using single solution processing. Yutzy uses at least three processing solutions and may use as many as six. His process involves keeping all color substances immobilized until development is completed and then releasing them for transfer. The principle of the release mechanism of Yutzy is to utilize color substances which are diffusible in the presence of alkali and thereafter to contact the developed negative with an alkaline image-receiving sheet. The alkali diffuses into the negative and the color substances begin to diffuse.

White is cited for disclosure of emul-

sion layers sensitized to different regions of the visible spectrum and associated layers of color-providing substance. It is not a transfer process.

Rogers '668 is cited for dye transfer processes in which complete dyes are provided in separate layers or particles of slowly permeable material. It appears to have been relied on as merely cumulative.

We will first dispose of the product claims. At the argument appellants counsel conceded claims 82-86 to be of doubtful validity and retained in the case pending the decision of the Supreme Court in *Hazeltine v. Brenner*. They were rejected on Yutzy taken with White or Land or both. They are directed to the monopack negative element per se. We agree that the products defined would be obvious in view of the references cited against them. The second group of product claims consists of 69 as a main claim and two dependent claims 70, 71. Claim 69 is directed broadly to the complete photographic unit: monopack, image-receiving layer, connecting means, and single processing liquid in its pod. Appellants say its language is analogous to that of claim 52, quoted above. Hence, it is broad language. Appellants' brief concedes the definition of the monopack element "comes very close to reading on the multilayer negative of Yutzy as a structure per se if one ignores the functional statements *** or recitations of the manner of use ***." The examiner said the general combination is shown in Rogers '606 but the board pointed out it is so shown with a screen-type negative, holding it would be obvious, however, to provide the same combination with Yutzy's monopack and held it obvious on Land or Rogers '606 in view of Yutzy. As to claim 69, we agree. The dependent claims contain further limitations which the board regarded as functional and gave no weight to them. Since claim 71 depends from 70 they have a common limitation in 70 which is, we think, significant. It reads:

*** said color-providing substances associated with at least the inner photosensitive emulsion layers are adapted to be rendered diffusible in said liquid composition only after at least substantial development of the next outermost photosensitive *** layer has occurred. [Emphasis ours.]

[18] It is true that the italicized portions are "functional" but we do not regard that as good ground to give them "no weight" in view of the third para-

graph of 35 U.S.C. 112. We give them weight and with this limitation we think claims 70 and 71 are limited to deferred thereby being limited to the actual invention disclosed and hence allowable for the same reasons given by the board in allowing claim 56, of which it said: "In our view the art of record as applied by the examiner does not suggest the process of this claim." We think the same reasoning applies to the product.

We turn now to the process claims. There are only two independent claims. Claim 52, above, from which claims 53-55, 58-61, 63, 64, 66-68, and 90 depend; and claim 73, from which claims 74-76, and 78-81 depend. As we indicated above in footnote 2, the obviousness rejection appears to rest, not on obviousness of the invention as disclosed but on the obviousness of processes of the *broadly* defined in the claims. We may state our conclusion broadly as an agreement with the Patent Office as to those claims which say nothing whatever about what we regard as the invention, deferred diffusion by whatever name it may be called, but disagreement as to the claims which contain reasonably clear limitations thereto, reading the dependent claims, as we must, as including all limitations in the claims from which they depend. We will now sort out the claims.

Claim 52 is reproduced above with the portions appellants rely on for patentability italicized. It will be seen that it recites the steps of exposing, developing, and transferring; that a broadly defined monopack such as Yutzy describes is exposed and developed and that there is imagewise immobilization of color as known to the art; that color is transferred to the image-receiving layer; and that a single processing liquid is used. And that is about all. We agree that the mere putting together of the Yutzy monopack with the Land and Rogers single processing liquid methods, without more, is properly described as obvious. We affirm the rejection of claim 52.

Claim 53 is almost the same as product claim 70 quoted from and discussed above. We think it should be allowed for the reasons given as to claim 70. We do not agree with the board's view that claim 53 merely hints at deferred diffusibility or that it is so broad as to read on Yutzy. We reverse its rejection. Claim 54 depends from 52, claim 55 from 54, and claims 61 and 63 from 56. Claim 54 calls for at least one color-providing substance having a rate of

solution in the processing solution slower than the rate of development of its associated silver halide layer. Appellants' brief describes this as a technique "to increase control of each color-providing substance by its own silver halide emulsion, and thus improve color isolation * * *." Claim 55 adds that the control is by a carrier permeated at a slower rate than the light-sensitive emulsion is permeated, 61 calls for carrier particles in the emulsion layer and 63 for a layer behind the emulsion layer. It seems to us these techniques, which we find in the prior art, have to do with imagewise immobilization, not with deferred diffusion as we understand it. We agree with the rejection of claims 54, 55, 61 and 63.

Claim 58 merely adds to 52 the spreading of the processing liquid according to the Land or Rogers technique and claim 59 the separating of negative and image layers after processing. Claim 60 specifies dye-developer from Rogers '606. We affirm the rejection of claims 58-60.

Claim 64 specifies including color-providing substance in the processing liquid to be associated with the outermost silver halide emulsion. Appellants describe this as a "unique embodiment" of their invention. The rejection of this claim appears to have gone along with that of 52. We find the incorporation of color substance in the processing liquid to be disclosed in Rogers '606 and Rogers '668. The claim says nothing about deferred diffusion. We affirm its rejection.

As to claim 66 the examiner noted that it is "not met by Rogers [606] alone." The solicitor lists it with claims alluding to deferred diffusion. Deferred appears to be accomplished by using a color-providing substance initially insoluble in the single processing liquid specified in parent claim 52 but rendered soluble during processing. Seeing no distinct reason for its rejection we reverse it.

Claims 67 and 68 are drawn to limitations which are to be found in Rogers '606, relating to development agents. Claim 90 specifies that the dye intermediate of claim 52 is a color coupler. Such is shown in Land. We sustain the rejection of claims 67, 68, and 90. This completes the claims depending from 52. Independent claim 78 resembles claim 52 but is more limited in specifying Rogers' dye-developers in the monopack, and the color sensitivities of the emulsions, and the alkaline processing solution, and the think it unpatentable for the same reasons as claim 52. The claims dependent from it add various other limitations from the prior art and none refers

in any way to deferred diffusion. Their rejection is sustained.

Double Patenting Rejection

We find it unnecessary to pass separately on this rejection which appears to have been retained in the case in the events the Land and Rogers '606 patents were found to be unavailable as prior art. As stated earlier, and as the board viewed the matter, it is simply a narrower aspect of the obviousness question utilizing as a base the claims only of Rogers '606 plus the other prior art instead of the full Rogers disclosure. As to the claims on which we have affirmed the obviousness rejection, it is clearly unnecessary to pass on another rejection. As to the claims on which we have reversed the obviousness rejection, a fortiori this double patenting rejection, predicated on obviousness, would be reversed for the same reasons.

Conclusion

For the foregoing reasons, the decision of the board is reversed as to claims 53, 66, 70, and 71 and affirmed as to claims 52, 54, 55, 58-61, 63, 64, 67-69, 73-76, 78-86, and 90.

Judge MARTIN participated in the hearing of this case but died before a decision was reached.

WORLEY, Chief Judge, dissenting in part.

I agree with the reasoning and conclusions of the majority save its reversal of the rejection of claims 53, 66, 70 and 71. I disagree with the majority's conclusion with respect to the latter claims insofar as it appears to proceed on the rationale that the claims are limited to the same aspect of the invention as claimed in allowed claim 56, hence allowable for the reasons the board gave for allowing that claim.¹

As the majority observes, the disclosed invention is capable of expression in various ways. "Deferred diffusion" is one expression appellants use. What the majority apparently fails to recognize, however, is that there are several kinds of "deferred diffusion" disclosed by appellants, as exemplified by the following pertinent disclosure:

¹ Whether it is proper for the majority to compare those claims with allowed claim 56 is a question upon which it is not necessary to dwell at length. Suffice it to say it is well settled that appealed claims must be judged on their own merits and not on the basis of a comparison with other claims which have been allowed. See *In re Margaroli*, 50 CCPA 1400, 318 F.2d 348, 138 USPQ 158; *In re Ashley*, 50 CCPA 1200, 315 F.2d 945, 137 USPQ 361; and *In re McMurry*, 43 CCPA 821, 230 F.2d 442, 109 USPQ 46.

Another object of this invention is to provide diffusion transfer-reversal processes wherein diffusion of the color-providing substances associated with at least one emulsion layer of an integral multilayer photosensitive element to an image-receiving layer is controlled in such a way as to be deferred until at least substantial development of the latent color record contained in said emulsion layer has occurred.

* * *

In general, it may be stated that the desired deferred diffusibility of color-providing substances may be obtained by two types of processing. In one, the latent color record images in the several emulsion layers are substantially simultaneously developed prior to the time the non-immobilized color-providing substances in unexposed areas achieve the requisite diffusibility. In the second type of processing, the integral multilayer photosensitive element is processed layerwise, one emulsion layer being developed and the color-providing substances associated therewith, but not immobilized by development, rendered diffusible to the image-receiving layer substantially prior to the time development and diffusion occurs in another layer. In certain instances, an integral multilayer photosensitive element may be so constructed as to utilize both types of processing techniques. (Emphasis supplied)

The "second type" of processing, in which the "integral multilayer photosensitive element is processed layerwise," appears to correspond substantially to that recited in claim 56. The first type of processing, in which the several exposed emulsion layers may all be developed prior to the time diffusion begins to occur, appears to be embraced by the language of claims 53 and 70 as follows:

53. A process as defined in claim 52, wherein said color-providing substance associated with undeveloped areas of at least each inner emulsion

2 Appellants' specification also states:

* * * Thus, by deferred diffusibility it is intended to cover situations where non-immobilized color-providing substances associated with an inner emulsion are rendered diffusible after at least substantial development of an outer emulsion has occurred but simultaneously with the development of said inner emulsion, or where development of both said inner and outer emulsion layers has been substantially completed. (Emphasis supplied)

layer of said multilayer, photosensitive element is rendered diffusible *only after at least* substantial development has occurred.

70. A photographic product as set forth in claim 69, wherein said color-providing substances associated with at least the inner photosensitive emulsion layers are adapted to be rendered diffusible in said liquid composition *only after at least* substantial development of the next outermost photosensitive silver halide emulsion layer has occurred. (Emphasis supplied)

I read those claims, interpreted in light of the disclosure, to allow development of two, or three, emulsion layers, either simultaneously or sequentially, before diffusion begins to occur to any appreciable extent. It is in that regard that the Yutzy reference becomes particularly pertinent. There can be no doubt that the Yutzy reference relied on by the Patent Office does disclose a type of "deferred diffusion." The following excerpts from Yutzy make it clear that he recognized the necessity and desirability of deferred diffusion:

In the broadest aspects of my invention, the objects are accomplished by exposing to a colored subject a photographic element containing at least two silver halide emulsions sensitized to different regions of the visible spectrum and each emulsion having intimately associated with it a potentially diffusible coloring material which is non-wandering during coating and development, developing the exposed photographic element with a solution of a silver halide developing agent which renders said coloring material non-diffusible only in the regions of exposure and development of the emulsions, rendering the coloring material only in the unexposed regions of the emulsions diffusible and placing the emulsions in intimate contact with an absorbent surface to simultaneously cause the diffusible coloring material in the emulsions to diffuse image-wise into the absorbent surface.

* * * In a three-layer silver halide material for subtractive color photography the blue-, green- and red-sen-

3 Appellants' specification states:

* * * It is to be understood that, prior to development, all of the color-providing substances present are considered immobile in that they are potentially diffusible. Various mechanisms may be utilized to create the desired deferred diffusibility of the color-providing substances. * * *

sitive layers normally contain, respectively, yellow, magenta and cyan dyes or color formers. These dyes or color formers must be such as to be non-wandering during the coating operations and usually during at least the early stages of negative development. This is conventionally accomplished by any of several means, namely, using very large molecules, substances containing groups which are substantive to gelatin or the vehicle, molecules containing groups which can be mordanted by conventional cation or anion mordants, etc. In my invention, dyes or color formers are selected such that they will diffuse from layer to layer during coating or negative development, with the additional characteristic that by an appropriate step in the processing they can be made to diffuse easily so that after a negative development the release mechanism can be called into operation so that unaltered dye or color former can thereupon diffuse readily to a receiving sheet which has been placed in contact with the emulsion layers. * * *

* * * If dyes or couplers are used which diffuse at too early a stage, i.e., during coating or development, then the association between the appropriate dye and silver halide is lost and color separation will not be obtained. The dyes or color formers may be rendered non-wandering during coating by many techniques which would include mordanting, precipitation with metallic ions, and the like. Similarly, dyes or color formers can be used in chemical combinations, such as esters which are hydrolyzed at an appropriate step in the processing to release the dye or color former as a smaller molecule to wander. * * * (Emphasis supplied)

Those same concepts are expressed in slightly different language in appellants' specification, as noted by the examiner. Indeed, as the examiner pointed out,⁴ it would seem necessary for

⁴ The examiner stated:

* * * It appears that the problem is solved generally in the same way by both appellants and Yutzy. Both defer diffusion of the color-providing substances until the development of the negative image which supplies the control mechanism has at least gone through its early stages. * * * the only critical mechanism evident in the case is the one exemplified in any of the Rogers or Land patents. That is to say, the concept of providing a color-providing substance which will diffuse only after at least early stages of development of negative image is con-

the operation of any diffusion transfer process of the type disclosed by appellants that diffusion from unexposed areas of the positive image forming material be deferred until development of the exposed regions of the negative has proceeded to a substantial degree. As the board noted:

Claims 53, 54, and 55 hint at the concept of deferred diffusibility but are so broadly worded as to read on the complete development of all the emulsion layers as in Yutzy prior to rendering the color providing substances diffusible to the image receiving layer. The examiner has pointed out where certain details of the claims are found in the prior art and we find no error in the application of the references. * * * (Emphasis supplied)

Appellants do not challenge the board's analysis of the scope of those claims, but only assert the board erred "in failing to give weight to the express requirement in these claims that both development and transfer must be effected by a single liquid composition." It seems to me the limitations in claims 53, 70 and 71 do not impart patentability for the same reasons expressed by the majority with respect to claims 52 and 69, from which the former are dependent.

As for claim 66, it reads:

66. A process as defined in claim 52, wherein said color-providing substances are initially insoluble in said liquid processing composition, said process including the step of rendering said nonimmobilized color-providing substances soluble in said liquid processing composition whereby they may diffuse to said image-receiving layer.

The specification discloses several techniques by which those limitations apparently are accomplished, among which are:

(1) incorporating the color material in a "high-boiling, water- and alkali-immiscible liquid," whereupon contact by the processing liquid renders the color material "increasingly diffusible by a differential extraction process;"

considered a feature of any one of the last mentioned references. The deferred diffusion of substances such as dye developers is inherent in the monochromatic process specifically disclosed by Rogers (606), for instance. How else is the lack of transfer from exposed areas of negative emulsion controlled? * * *

(2) employing the color material in particle form, whereby it "is more slowly dissolved than if molecularly dispersed, thus permitting one to effect the desired deferred diffusibility;"

(3) associating the color material with a "temporary mordant" which renders it "temporarily insoluble," subsequent contact with the processing solution hydrolyzes off the "insolubilizing substituent" and renders the color material diffusible;

(4) employing an auxiliary developer, the oxidation product of which reacts with unoxidized dye developer while the latter "is still in an immobile condition, i.e. prior to its being solubilized by the liquid processing composition," thereby preventing diffusion of the reacted dye developer from exposed areas.

Appellants nowhere present an argument for the separate patentability of claim 66. The examiner and board have pointed out that many of the above techniques encompassed within the broad language of claim 66 are suggested by one or more of the Land, Rogers, or Yutzy references. Land, for example, mixes color material and developers in a high-boiling solvent "which has been found beneficial for introducing and maintaining coupler materials within emulsion layers;" the developers employed possess "low solubility in alkali but have good solubility in a high-boiling-point solvent." Rogers, in addition to disclosing the use of dye developers "in relatively large particle sizes," discloses "immobilizing" couplers "through the use of high-boiling-point solvents." As noted earlier, Yutzy discloses use of mordants, or esters "which are hydrolyzed at an appropriate step in the processing to release the dye or color former as a smaller molecule to wander." The use of an auxiliary developer described in (4) above is claimed more specifically in such claims as 67, 68, and 75 which the majority does not allow. I see no valid reason for reaching a different conclusion with respect to claim 66.

I would affirm the decision below in its entirety.